

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1-25. (Cancelled).

26. (Previously presented) A purified polynucleotide comprising SEQ ID NO: 30, wherein codon 48 of SEQ ID NO: 30 has been changed to GGG, or a polynucleotide fully complementary thereto.

27. (Cancelled).

28. (Previously Presented) The purified polynucleotide as claimed in claim 26, which further comprises SEQ ID NO: 3, SEQ ID NO: 4, or both SEQ ID NOS: 3 and 4, or the complement of SEQ ID NO: 3, SEQ ID NO: 4, or both SEQ ID NOS: 3 and 4.

29. (Previously Presented) A purified polynucleotide comprising SEQ ID NO: 29, wherein codon 58 of SEQ ID NO: 29 has been changed to CGA, or a polynucleotide fully complementary thereto.

30. (Cancelled).

31. (Previously Presented) The purified polynucleotide as claimed in claim 29, which further comprises SEQ ID NO: 1, SEQ ID NO: 2, or both SEQ ID NOS: 1 and 2, or the complement of SEQ ID NO: 1, SEQ ID NO: 2, or both SEQ ID NOS: 1 and 2.

32. (Previously presented) A purified polynucleotide consisting of a nucleotide sequence selected from: (A) SEQ ID NO: 1; (B) SEQ ID NO: 2; (C) SEQ ID NO: 3; (D) SEQ ID NO: 4; (E) SEQ ID NO: 5; (F) SEQ ID NO: 6; (G) SEQ ID NO: 7; and (H) SEQ ID NO: 8.

33. (Previously Presented) A purified polynucleotide that hybridizes specifically under stringent conditions with one or more polynucleotide sequences selected from SEQ ID NO: 1, SEQ ID NO: 2, SEQ ID NO: 3, SEQ ID NO: 4, SEQ ID NO: 5, SEQ ID NO: 6, SEQ ID NO: 7, and SEQ ID NO: 8;

wherein the stringent conditions comprise:

prehybridization and hybridization at 68°C in a mixture containing 5X SSPE (1X SPE is 0.18 M NaCl, 10mM NaH₂PO₄), 5X Denhardt's solution, 0.5% (w/v) sodium dodecyl sulfate (SDS), and 100 µg ml⁻¹ salmon sperm DNA;

two washings at laboratory temperature for 10 min. in the presence of 2X SSPE and 0.1% SDS;

one washing at 68°C for 15 min. in the presence of 1X SSPE and 0.1% SDS; and

one washing at 68°C for 15 min. in the presence of 0.1X SSPE and 0.1% SDS.

34. (Previously Presented) A kit for detecting *M. tuberculosis*, said kit comprising:

(A) a polynucleotide probe that hybridizes under high stringency conditions with a purified polynucleotide selected from SEQ ID NO: 27, SEQ ID NO: 28, SEQ ID NO: 29, SEQ ID NO: 30, and SEQ ID NO: 31; and

(B) reagents to perform a nucleic acid hybridization reaction;

wherein the stringent conditions comprise:

prehybridization and hybridization at 68°C in a mixture containing 5X SSPE (1X SPE is 0.18 M NaCl, 10mM NaH₂PO₄), 5X Denhardt's solution, 0.5% (w/v) sodium dodecyl sulfate (SDS), and 100 µg ml⁻¹ salmon sperm DNA;

two washings at laboratory temperature for 10 min. in the presence of 2X SSPE and 0.1% SDS;

one washing at 68°C for 15 min. in the presence of 1X SSPE and 0.1% SDS; and
one washing at 68°C for 15 min. in the presence of 0.1X SSPE and 0.1% SDS.

35. (Previously presented) A kit for detecting *M. tuberculosis*, said kit comprising:

(A) at least one primer pair selected from (i) SEQ ID NO: 1, and SEQ ID NO: 2; (ii) SEQ ID NO: 3, and SEQ ID NO: 4; (iii) SEQ ID NO: 5, and SEQ ID NO: 6; and (iv) SEQ ID NO: 7, and SEQ ID NO: 8; and

(B) reagents to perform a nucleic acid amplification reaction.

36. (Previously presented) An *E. coli* strain containing the plasmid pMYC2501 deposited at the C.N.C.M. on Aug. 20, 2001, under Accession No. I-2711.

37. (Previously presented) An *E. coli* strain containing the plasmid pMYC2502 deposited at the C.N.C.M. on Aug. 20, 2001, under Accession No. I-2712.

38. (Previously presented) An *E. coli* strain containing the plasmid pMYC2503 deposited at the C.N.C.M. on Aug. 20, 2001, under Accession No. I-2713.

39. (Original) A purified polynucleotide sequence delimited upstream by the polynucleotide sequence of SEQ ID NO: 1 and downstream by the polynucleotide sequence of SEQ ID NO: 2, wherein the purified polynucleotide sequence comprises SEQ ID NO: 29.

40. (Previously presented) A purified polynucleotide sequence delimited upstream by the polynucleotide sequence of SEQ ID NO: 3 and downstream by the

polynucleotide sequence of SEQ ID NO: 4, wherein the purified polynucleotide sequence comprises SEQ ID NO: 30.

41. (Previously presented) A purified polynucleotide sequence delimited upstream by the polynucleotide sequence of SEQ ID NO: 5 and downstream by the polynucleotide sequence of SEQ ID NO: 6, wherein the purified polynucleotide sequence comprises SEQ ID NO: 27.

42. (Previously Presented) A purified polynucleotide sequence delimited upstream by the polynucleotide sequence of SEQ ID NO: 7 and downstream by the polynucleotide sequence of SEQ ID NO: 8, wherein the purified polynucleotide sequence comprises SEQ ID NO: 28.

43-44. (Cancelled).

45. (Currently amended) A polynucleotide selected from: a purified polynucleotide of 1488 bp designated as *alkA* and consisting of SEQ ID NO: 27; a purified polynucleotide of 495 bp designated as *ogt* and consisting of SEQ ID NO: 28; a purified polynucleotide of 423 bp designated *mutT2* and consisting of SEQ ID NO: 29; a purified polynucleotide of 744 bp designated *Rv3908* and consisting of SEQ ID NO: 30; a purified polynucleotide of 912 bp designated *mutY* and consisting of SEQ ID NO: 31; and a purified polynucleotide of 2406 bp designated *Rv3909* and consisting of SEQ ID NO: 32.

46. (Previously Presented) A polynucleotide selected from: a purified cDNA polynucleotide comprising SEQ ID NO: 27 (*alkA*); a purified polynucleotide comprising SEQ ID NO: 30 (*Rv3908*); and a purified polynucleotide comprising SEQ ID NO: 31 (*mutY*).

47. (Canceled).

48. (Previously Presented) A purified polynucleotide sequence delimited upstream by the polynucleotide sequence of SEQ ID NO:1 and downstream by the polynucleotide sequence of SEQ ID NO:2, wherein the purified polynucleotide sequence comprises SEQ ID NO:29, except that codon 58 is CGA instead of GGA.

49. (Previously Presented) A purified polynucleotide sequence delimited upstream by the polynucleotide sequence of SEQ ID NO:3 and downstream by the polynucleotide sequence of SEQ ID NO:4, wherein the purified polynucleotide sequence comprises SEQ ID NO:30, except that codon 48 is GGG instead of CGG.

50. (Previously Presented) A purified polynucleotide sequence delimited upstream by the polynucleotide sequence of SEQ ID NO:5 and downstream by the polynucleotide sequence of SEQ ID NO:6, wherein the purified polynucleotide sequence comprises SEQ ID NO:27, except that codon 12 is GTC instead of ATC.

51. (Previously Presented) A purified polynucleotide sequence delimited upstream by the polynucleotide sequence of SEQ ID NO:7 and downstream by the polynucleotide sequence of SEQ ID NO:8, wherein the purified polynucleotide sequence comprises SEQ ID NO:28, except that codon 37 is CTC instead of CGC.

52. (Previously Presented) A kit for detecting *M. tuberculosis* of Beijing genotype that has the MDR phenotype, said kit comprising :

a) one or more polynucleotide probe selected from:

a purified polynucleotide sequence delimited upstream by the polynucleotide sequence of SEQ ID NO:1 and downstream by the polynucleotide sequence of SEQ ID NO:2, wherein the purified

polynucleotide sequence comprises SEQ ID NO:29, except that codon 58 is CGA instead of GGA;

a purified polynucleotide sequence delimited upstream by the polynucleotide sequence of SEQ ID NO:3 and downstream by the polynucleotide sequence of SEQ ID NO:4, wherein the purified polynucleotide sequence comprises SEQ ID NO:30, except that codon 48 is GGG instead of CGG;

a purified polynucleotide sequence delimited upstream by the polynucleotide sequence of SEQ ID NO:5 and downstream by the polynucleotide sequence of SEQ ID NO:6, wherein the purified polynucleotide sequence comprises SEQ ID NO:27, except that codon 12 is GTC instead of ATC; and

a purified polynucleotide sequence delimited upstream by the polynucleotide sequence of SEQ ID NO:7 and downstream by the polynucleotide sequence of SEQ ID NO:8, wherein the purified polynucleotide sequence comprises SEQ ID NO:28, except that codon 37 is CTC instead of CGC; and

b) reagents to perform a nucleic acid hybridization reaction.